



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 168213

TO: Tamthom Truong
Location: rem/5B19/5C18
Art Unit: 1624
Tuesday, October 18, 2005
Case Serial Number: 10/088814

From: John DiNatale
Location: Biotech-Chem Library
REM-1B65
Phone: (571)272-2557

john.dinatale@uspto.gov

Search Notes

Examiner Truong,

See attached results.

If you have any questions about this search feel free to contact me at any time.

Thank you for using STIC search services!

John DiNatale
Technical Information Specialist
STIC Biotech/Chem Library
(571)272-2557



Home Index Resources Centers Internet Search



Scientific & Technical Information Center



SERVICES

Database Search [submit](#)
 PLUS Search [submit](#)
 Book/Article Delivery [submit](#)
 Book/Journal Purchase [submit](#)
 Foreign Patents [submit](#)
 Telework Support
 Translation [submit](#)
 SIRA Automation Training
 STIC Demos & Events

RESOURCES

STIC Online Catalog
 Databases
 E-Books [search](#)
 E-Journals [search](#)
 Legal Tools
 Nanotechnology
 Reference Tools

STIC

About Us
 FAQ
 Locations & Hours
 News
 Site Map
 Staff

Search STIC Site

Online Database Search Form

Search requests relating to published applications, patent families, and litigation can be submitted by filling out this form and clicking on "Send."

Tech Center:

☐ TC 1600 ☐ TC 1700 ☐ TC 2100 ☐ TC 2600 ☐ TC 2800
☐ TC 2900 ☐ TC 3600 ☐ TC 3700 ☐ Law Lib ☐ Other

Your Contact Information:

* indicates mandatory information.

Your Name:

*Email Address:
 (e.g., Susan.Smith@uspto.gov)

*Employee No.:

*Art Unit/Org.:

*Office Location:

*Phone No.:

Mailbox No.:

*Case serial number:

If not related to a patent application, please enter NA here.

Class / Subclass(es)

Earliest Priority Filing Date:

Format preferred for results:

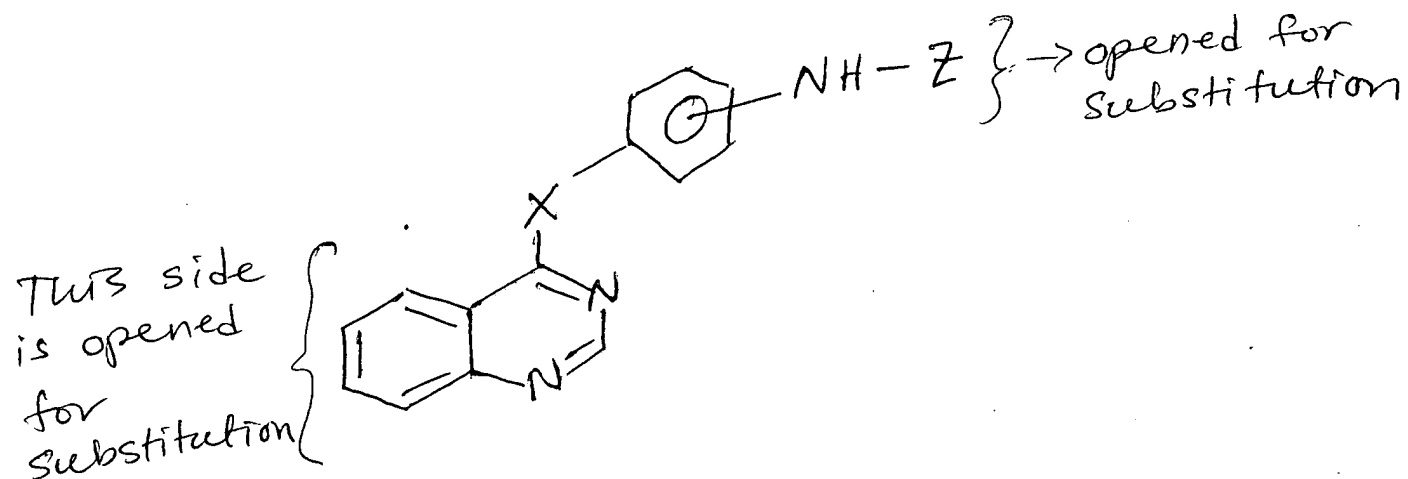
☒ Paper ☐ Diskette ☐ E-mail

Provide detailed information on your search topic:

- In your own words, describe in detail the concepts or subjects you want us to search.
- Include synonyms, keywords, and acronyms. Define terms that have special meaning.
- *For Chemical Structure Searches Only*
Include the elected species or structures, keywords, synonyms, acronyms, and
- *For Sequence Searches Only*
Include all pertinent information (parent, child, divisional, or issued patent number and serial number).
- *For Foreign Patent Family Searches Only*
Include the country name and patent number.

10/088, 814

Query



$X = NH$

$Z = C(=O), \text{ or } S(O)_2$

See also claim 20



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 2356

SERIAL NUMBER 10/088,814	FILING DATE 09/04/2002 RULE	CLASS 514	GROUP ART UNIT 1624	ATTORNEY DOCKET NO. ASZD-P01-599
-----------------------------	---------------------------------------	--------------	------------------------	--

APPLICANTS

Andrew Austen Mortlock, Macclesfield Cheshire, UNITED KINGDOM; *1 + amdt*

Nicholas John Keen, Macclesfield Cheshire, UNITED KINGDOM;
 Frederic Henri Jung, Reims, FRANCE; Andrew George Brewster, Paris, FRANCE;

** CONTINUING DATA *****
 This application is a 371 of PCT/GB00/03580 09/18/2000

** FOREIGN APPLICATIONS *****
 UNITED KINGDOM 9922170.7 09/21/1999
 UNITED KINGDOM 9922154.1 09/21/1999

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
 ** 02/26/2004

Foreign Priority claimed 35 USC 119 (a-d) conditions met Verified and Acknowledged	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance Examiner's Signature _____ Initials _____	STATE OR COUNTRY UNITED KINGDOM	SHEETS DRAWING	TOTAL CLAIMS 31	INDEPENDENT CLAIMS 2
--	--	--	-------------------	-----------------------	----------------------------

ADDRESS
 44992
 ASTRAZENECA R&D BOSTON
 35 GATEHOUSE DRIVE
 WALTHAM , MA
 02451-1215

TITLE
 Quinazoline derivatives and their use as pharmaceuticals

<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing)
--

FILING FEE RECEIVED 1570	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit
---	--	--

Application No. 10/088,814
 Amendment Dated 12 August 2005
 Reply to Office Action of 14 March 2005

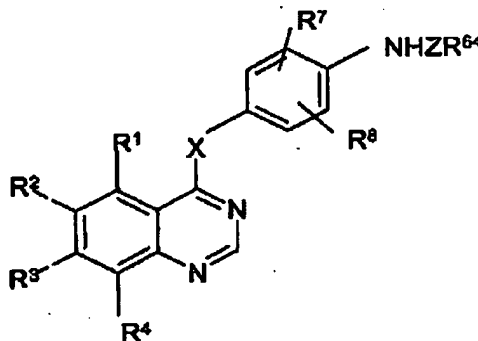
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-19. (Cancelled)

20. (Currently amended) A compound of formula (IIC)



or a salt, ester or amide thereof;

where X is NHO , or S , S(O) or S(O)_2 , or NR^8 where R^8 is hydrogen or C_{1-6} alkyl;

Z is C(O) or S(O)_2 ;

R^{64} is optionally substituted hydrocarbyl or optionally substituted heterocyclyl, optionally substituted aryl selected from phenyl optionally substituted with up to 5 groups selected from nitro, halo, carboxy, cyano, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} alkylthio, acetoxy, acetamido, hydroxy, aminosulphonyl, C_{1-4} alkylsulphonyl, trifluoromethyl, arC_{1-10} alkyl, or arC_{1-10} alkyloxy wherein aryl rings in the substituents may themselves be substituted with halo, nitro or C_{1-4} alkyl; optionally substituted C_{3-6} cycloalkyl selected from optionally substituted cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl any of which may be optionally substituted with nitro, halo, carboxy, cyano, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} alkylthio, acetoxy, acetamido, hydroxy, aminosulphonyl, C_{1-4} alkylsulphonyl, trifluoromethyl, arC_{1-10} alkyl, arC_{1-10} alkyloxy, or aryl wherein aryl rings in the substituents may themselves be substituted with halo, nitro or C_{1-4} alkyl; optionally substituted arC_{1-10} alkyl selected from optionally substituted benzyl, phenylethyl or phenylpropyl, wherein the phenyl ring is optionally substituted with up to 5 groups selected from nitro, halo, carboxy, cyano, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} alkylthio, acetoxy, acetamido, hydroxy, aminosulphonyl, C_{1-4} alkylsulphonyl, trifluoromethyl, arC_{1-10} alkyl, or arC_{1-10} alkyloxy wherein aryl

Application No. 10/088,814
Amendment Dated 12 August 2005
Reply to Office Action of 14 March 2005

rings in the substituents may themselves be substituted with halo, carboxy, trifluoromethyl, nitro or C₁₋₄alkyl;

optionally substituted heterocyclyl selected from pyridyl, pyrazine, pyrimidinyl, pyrrolidino, furyl, tetrahydrofuryl, oxazolyl, morpholino, thiadiazole, indolyl, quinolinyl, isoquinolinyl, pyrazolyl, methylenedioxybenzyl, thiophene and benzothiophene, all of which may be optionally

substituted with one or more groups selected from nitro, halo, carboxy, cyano, C₁₋₄alkyl, C₁₋₄alkoxy, C₁₋₄alkylthio, acetoxy, acetamido, hydroxy, aminosulphonyl, C₁₋₄alkylsulphonyl,

trifluoromethyl, arC₁₋₁₀alkyl, or arC₁₋₁₀alkyloxy wherein aryl rings in the substituents may themselves be substituted with halo, carboxy, trifluoromethyl, nitro or C₁₋₄alkyl;

optionally substituted C₁₋₁₀alkyl where optional substituents for C₁₋₁₀alkyl include amino, mono- or di-C₁₋₄alkylamino, hydroxy, C₁₋₄alkoxy, heterocyclyl selected from thiophene,

tetrahydrothiophene-1,1-dioxide, pyrrolidino, morpholino, furyl and tetrahydrofuryl, C₁₋₄alkoxy, acetamido, aryloxy, alkylC₁₋₄thio, aryl where the aryl ring may itself be substituted with halo,

carboxy, trifluoromethyl, nitro, carboxy or trifluoromethyl, C₂₋₁₀cycloalkyl or C₂₋₁₀cycloalkenyl; or optionally substituted C₂₋₁₀alkenyl or C₂₋₁₀alkynyl where optional substituents for C₂₋₁₀alkenyl or

C₂₋₁₀alkynyl include nitro, halo, carboxy, cyano, C₁₋₄alkyl, C₁₋₄alkoxy, C₁₋₄alkylthio, acetoxy, acetamido, hydroxy, aminosulphonyl, C₁₋₄alkylsulphonyl, trifluoromethyl, arC₁₋₁₀alkyl, or

arC₁₋₁₀alkyloxy wherein aryl rings in the substituents may themselves be substituted with halo, carboxy, trifluoromethyl, nitro or C₁₋₄alkyl; or such groups are substituted by aryl, where the aryl ring may itself be substituted with halo, nitro, carboxy, trifluoromethyl;

R⁷ and R⁸ are independently selected from hydrogen, halo, C₁₋₄alkyl, C₁₋₄alkoxy,

C₁₋₄alkoxymethyl, di(C₁₋₄alkoxy)methyl, C₁₋₄alkanoyl, trifluoromethyl, cyano, amino, C₂₋₆alkenyl,

C₂₋₆alkynyl, a phenyl group, a benzyl group or a 5-6-membered heterocyclic group with 1-3 heteroatoms, selected independently from O, S and N, which heterocyclic group may be

aromatic or non-aromatic and may be saturated, and [(D)]linked via a ring carbon or nitrogen atom[(D)], or unsaturated, and [(D)]linked via a ring carbon atom[(D)], and which phenyl, benzyl or

heterocyclic group may bear on one or more ring carbon atoms up to 5 substituents selected

from hydroxy, halogeno, C₁₋₃alkyl, C₁₋₃alkoxy, C₁₋₃alkanoyloxy, trifluoromethyl, cyano, amino,

nitro, C₂₋₄alkanoyl, C₁₋₄alkanoylamino, C₁₋₄alkoxycarbonyl, C₁₋₄alkylsulphonyl, C₁₋₄alkylsulphinyl,

C₁₋₄alkylsulphonyl, carbamoyl, N-C₁₋₄alkylcarbamoyl, N,N-di(C₁₋₄alkyl)carbamoyl,

aminosulphonyl, N-C₁₋₄alkylaminosulphonyl, N,N-di(C₁₋₄alkyl)aminosulphonyl,

C₁₋₄alkylsulphonylamino, and a saturated heterocyclic group selected from morpholino,

thiomorpholino, pyrrolidinyl, piperazinyl, piperidinyl, imidazolidinyl and pyrazolidinyl, which

saturated heterocyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno,

Application No. 10/088,814
 Amendment Dated 12 August 2005
 Reply to Office Action of 14 March 2005

C₁₋₃alkyl, C₁₋₃alkoxy, C₁₋₃alkano/loxy, trifluoromethyl, cyano, amino, nitro and C₁₋₄alkoxycarbonyl, and

where R¹, R², R³ and R⁴ are independently selected from halo, cyano, nitro, trifluoromethyl, C₁₋₃alkyl, -NR¹³R¹⁴, [(Q)]wherein R¹³ and R¹⁴, which may be the same or different, each represents hydrogen or C₁₋₃alkyl[(D)], or -X¹R¹⁵, [(Q)]wherein X¹ represents a direct bond, -O-, -CH₂-, -OCO-, carbonyl, -S-, -Si-, -SO₂-, -NR¹⁶CO-, -CONR¹⁶-, -SO₂NR¹⁶-, -NR¹⁷SO₂- or -NR¹⁸-, [(Q)]wherein R¹⁶, R¹⁷ and R¹⁸ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[(D)], and R¹⁹ is selected from one of the following groups:

1') hydrogen or C₁₋₆alkyl which may be unsubstituted or which may be substituted with one or more groups selected from hydroxy, fluoro or amino;

2') C₁₋₃alkylX²COR¹⁹ [(Q)]wherein X² represents -O- or -NR²⁰-, [(Q)]in which R²⁰ represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[(D)], and R¹⁹ represents C₁₋₃alkyl, -NR²¹R²² or -OR²³-, [(Q)]wherein R²¹, R²² and R²³ which may be the same or different each represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[(D)];

3') C₁₋₃alkylX³R²⁴ [(Q)]wherein X³ represents -O-, -S-, -SO-, -SO₂-, -OCO-, -NR²⁵CO-, -CONR²⁵-, -SO₂NR²⁷-, -NR²⁶SO₂- or -NR²⁸-, [(Q)]wherein R²⁵, R²⁶, R²⁷, R²⁸ and R²⁹ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[(D)], and R²⁴ represents hydrogen, C₁₋₃alkyl, cyclopentyl, cyclohexyl or a 5-6-membered saturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which C₁₋₃alkyl group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno and C₁₋₄alkoxy and which cyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno, C₁₋₄alkyl, C₁₋₄hydroxyalkyl and C₁₋₄alkoxy[(D)];

4') C₁₋₆alkylX⁴C₁₋₃alkylX⁵R³⁰ [(Q)]wherein X⁴ and X⁵ which may be the same or different are each -O-, -S-, -SO-, -SO₂-, -NR³¹CO-, -CONR³²-, -SO₂NR³³-, -NR³⁴SO₂- or -NR³⁵-, [(Q)]wherein R³¹, R³², R³³, R³⁴ and R³⁵ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[(D)], and R³⁰ represents hydrogen or C₁₋₃alkyl[(D)];

5') R³⁶ [(Q)]wherein R³⁶ is a 5-6-membered saturated heterocyclic group, [(Q)]linked via carbon or nitrogen[(D)], with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno, C₁₋₄alkyl, C₁₋₄hydroxyalkyl, C₁₋₄alkoxy, C₁₋₄alkoxyC₁₋₄alkyl and C₁₋₄alkylsulphonylC₁₋₄alkyl[(D)];

6') C₁₋₃alkylR³⁸ [(Q)]wherein R³⁸ is as defined in (5') above[(D)];

7') C₂₋₆alkenylR³⁹ [(Q)]wherein R³⁹ is as defined in (5') above[(D)];

8') C₂₋₅alkynylR³⁹ [(Q)]wherein R³⁹ is as defined in (5') above[(D)];

9') R³⁷ [(Q)]wherein R³⁷ represents a pyridone group, a phenyl group or a 5-6-membered aromatic heterocyclic group, [(Q)]linked via carbon or nitrogen[(D)], with 1-3 heteroatoms selected from O, N

Application No. 10/088,814
 Amendment Dated 12 August 2005
 Reply to Office Action of 14 March 2005

and S, which pyridone, phenyl or aromatic heterocyclic group may carry up to 5 substituents on an available carbon atom selected from hydroxy, halogeno, amino, C₁₋₄alkyl, C₁₋₄alkoxy, C₁₋₄hydroxyalkyl, C₁₋₄aminoalkyl, C₁₋₄alkylamino, C₁₋₄hydroxyalkoxy, carboxy, trifluoromethyl, cyano, -CONR³⁹R³⁹ and -NR⁴⁰COR⁴¹, [(Q)wherein R³⁹, R³⁹, R⁴⁰ and R⁴¹, which may be the same or different, each represents hydrogen, C₁₋₄alkyl or C₁₋₃alkoxyC₂₋₃alkyl(D)];

10') C₁₋₆alkylR³⁷ [(Q)wherein R³⁷ is as defined in (9') above(D)];

11') C₂₋₆alkenylR³⁷ [(Q)wherein R³⁷ is as defined in (9') above(D)];

12') C₂₋₆alkynylR³⁷ [(Q)wherein R³⁷ is as defined in (9') above(D)];

13') C₁₋₃alkylX⁶R³⁷ [(Q)wherein X⁶ represents -O-, -S-, -SO-, -SO₂-, -NR⁴²CO-, -CONR⁴³-, -SO₂NR⁴⁴-, -NR⁴⁵SO₂- or -NR⁴⁶-, [(Q)wherein R⁴², R⁴³, R⁴⁴, R⁴⁵ and R⁴⁶ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl(D)], and R³⁷ is as defined hereinbefore(D)];

14') C₂₋₆alkenylX⁷R³⁷ [(Q)wherein X⁷ represents -O-, -S-, -SO-, -SO₂-, -NR⁴⁷CO-, -CONR⁴⁸-, -SO₂NR⁴⁹-, -NR⁵⁰SO₂- or -NR⁵¹-, [(Q)wherein R⁴⁷, R⁴⁸, R⁴⁹, R⁵⁰ and R⁵¹ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl(D)], and R³⁷ is as defined in (9') above(D)];

15') C₂₋₆alkynylX⁸R³⁷ [(Q)wherein X⁸ represents -O-, -S-, -SO-, -SO₂-, -NR⁵²CO-, -CONR⁵³-, -SO₂NR⁵⁴-, -NR⁵⁵SO₂- or -NR⁵⁶-, [(Q)wherein R⁵², R⁵³, R⁵⁴, R⁵⁵ and R⁵⁶ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl(D)], and R³⁷ is as defined hereinbefore(D)];

16') C₁₋₃alkylX⁹C₁₋₃alkylR³⁷ [(Q)wherein X⁹ represents -O-, -S-, -SO-, -SO₂-, -NR⁵⁷CO-, -CONR⁵⁸-, -SO₂NR⁵⁹-, -NR⁶⁰SO₂- or -NR⁶¹-, [(Q)wherein R⁵⁷, R⁵⁸, R⁵⁹, R⁶⁰ and R⁶¹ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl(D)], and R³⁷ is as defined hereinbefore(D)];

and

17') C₁₋₃alkylX⁹C₁₋₃alkylR³⁸ [(Q)wherein X⁹ and R³⁸ are as defined in (5') above(D)];

provided that i) where R¹, R⁴, R⁷ and R⁸ are all hydrogen and R² and R³ are both hydrogen or both methoxy, R⁶⁴ is other than phenyl; and

ii) where R¹, R⁴, R⁶, R⁷ and R⁸ are all hydrogen and R² and R³ are methoxy, and Z is C(O), R⁶⁴ is other than methyl; and

iii) wherein at least one of R¹-R⁴ is -X¹R¹⁵.

21-26. (Cancelled)

27. (Currently amended) A method for preparing a compound according to claim 2049, which method comprises reacting a compound of formula (VIII[(Q)])



STIC SEARCH RESULTS FEEDBACK FORM

Biotech-Chem Library

Questions about the scope or the results of the search? Contact ***the searcher or contact:***

Mary Hale, Information Branch Supervisor
Remsen Bldg. 01 D86
571-272-2507

Voluntary Results Feedback Form

➤ I am an examiner in Workgroup: Example: 1610

➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

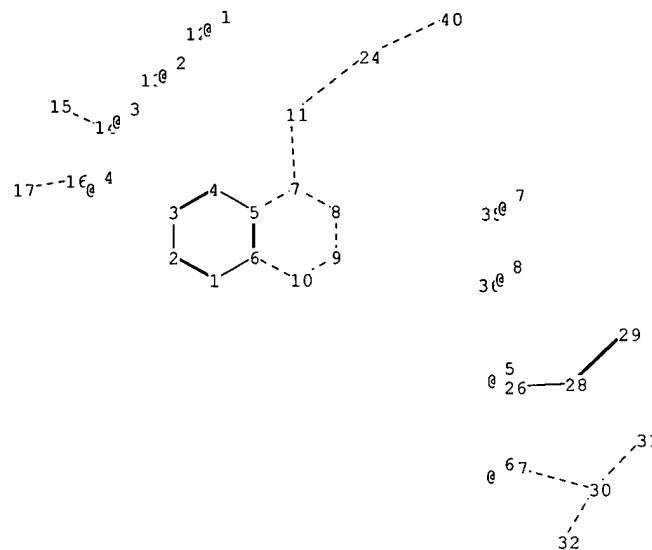
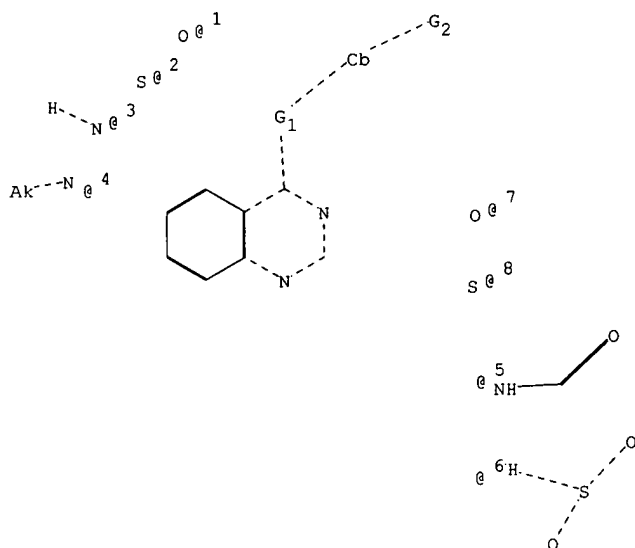
➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC-Biotech-Chem Library Remsen Bldg.





chain nodes :

11 12 13 14 15 16 17 24 26 27 29 31 32 35 36 40

ring nodes :

1 2 3 4 5 6 7 8 9 10

ring/chain nodes :

28 30

chain bonds :

7-11 11-24 14-15 16-17 24-40 26-28 27-30 28-29 30-31 30-32

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10

exact/norm bonds :

5-7 6-10 7-8 7-11 8-9 9-10 11-24 14-15 16-17 24-40 26-28 27-30 28-29 30-31
30-32

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

G1: [*1], [*2], [*3], [*4]

G2: [*5], [*6], [*7], [*8]

Connectivity :

8:2 E exact RC ring/chain 10:2 E exact RC ring/chain 29:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:CLASS
12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 24:Atom 26:CLASS 27:CLASS
28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 35:CLASS 36:CLASS 40:CLASS

Generic attributes :

24:

Saturation : Unsaturated

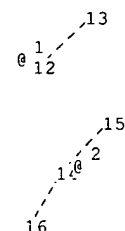
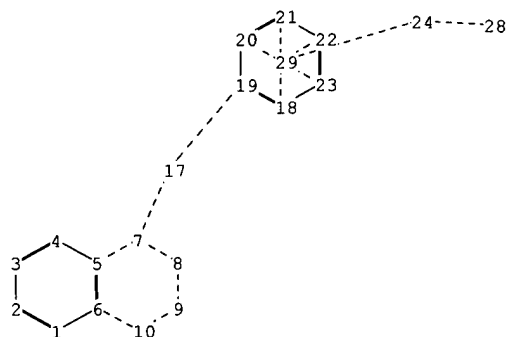
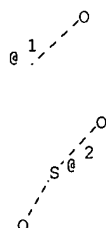
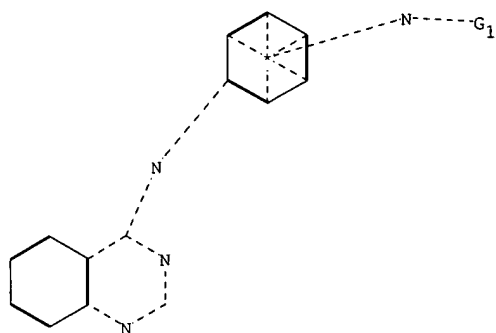
Number of Carbon Atoms : less than 7

Type of Ring System : Monocyclic

Element Count :

Node 24: Limited

C,C6



chain nodes :

13

ring nodes :

1 2 3 4 5 6 7 8 9 10 18 19 20 21 22 23

ring/chain nodes :

12 14 15 16 17 24 28

chain bonds :

12-13

ring/chain bonds :

7-17 14-16 14-15 17-19 24-28

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 18-19 18-23 19-20 20-21
21-22 22-23

exact/norm bonds :

5-7 6-10 7-8 7-17 8-9 9-10 12-13 14-16 14-15 17-19 24-28

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 18-19 18-23 19-20 20-21 21-22 22-23

G1: [*1], [*2]

Connectivity :

8:2 E exact RC ring/chain 10:2 E exact RC ring/chain 13:1 E exact RC ring/chain
17:2 E exact RC ring/chain 24:2 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 12:CLASS
13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:Atom 19:Atom 20:Atom 21:Atom
22:Atom

23:Atom 24:CLASS 28:CLASS 29:CLASS